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current-voltage conversion means connected to an amplifying means, which is connected to an analog-digital form pulse duration conversion means.

37. The apparatus of claim 35, wherein said signal processing means comprises a strobe pulse generating means and a selecting, sorting and counting means, which are connected to a conjunction means, which is connected to an analog-digital form pulse duration conversion means of said detected signal processing means.

Remarks

Claims 1-20 are pending in this application, all of which have been substituted new Claims 30-37. Claims 15-17 have been canceled. No new matters have been added. No new claims have been added.

Figs.8, 10 of the drawings have been corrected in compliance with the amended Specification. If approved, this correction will be incorporate into formal drawings to be filed before payment of the Issue Fee in the prosecution of this application.

New drawing sheets Figs.1-7, 9 are corrected, as requested by Examiner, in compliance with 4. SIZE OF PAPER. 37 CFR 1.84(f); 5. MARGINS. 37 CFR 1.84(g); and 12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p).

The Abstract, Title and Specification have been amended to correct spelling, grammatical and idiomatic errors. Also the BACKGROUND OF INVENTION in the Specification has been amended considering the referred by Examiner patent.

According to item 1 of the OFFICE ACTION SUMMARY, applicant thanks Examiner for very helpful advice regarding the Patent Attorney.

According items 2 of the OFFICE ACTION SUMMARY: The following is a quotation of 35 U.S. C.103(a) which forms the basis for all obviousness rejections set forth in this Office action: ...

Applicant thanks the Examiner for the presented fragment of 35 U.S. C.103.

According items 3 of the OFFICE ACTION SUMMARY: Claims 1-20 are rejected under 35 U.S. C. 103(a) as being unpatentable over the prior art discussed in the specification in view of Martin et al. (U.S. Patent No.4,160,246). ...

Martin et al. disclose a wireless smoke detector apparatus, including an infrared radiation source 20; photodetector 22; the frequency filters 534...536; audio amplifiers 540...566, 544...568; D.C. amplifiers 552...572; annunciator driver 558, a plurality of light-emitting diodes (LED) 47 and a horn or buzzer 48 (564). This device uses only one-way wireless communication from the smoke detector/transmitter 10 (12, 14) to the receiver/annunciator 16. The smoke detectors in compliance with their application field and functional intention should

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always be in "stand-by" (switched "on") alarm mode. The referred device by Martin et al. has excluded the two-way communication and has not taught to use the two-way communication. *The two-way communication is useless for the referred device and unobvious.*

Also, for example, the new use of the wire cable 20 for connection of traffic counter 22 and remote data storage/microprocessor 24(12) gives (imparts) an unobviousness to such new combination in the U.S. Patent No.5,524,129. The same we can find, for instance, in the referred patent by Martin et al., wherein the one-way wireless communication in combination of smoke detector and alarm illumination station is unobvious. The applicant's improved method and apparatus, wherein a new combination of a remote particle counting and measuring means, remote particle characteristic data processing means, remote control mode means and two-way wireless communication processes and means in compliance with the new use, *is unobvious*. All known particle counting and measuring devices of prior art use only local (direct) control or remote control by wire cables. The applicant's improved method and apparatus solve the problem of the particle counting and measuring in the inaccessible (or hard to access) areas, where all previous known particle counting and measuring devices are useless, because the solid portable units could not be controled by operator or a wire cable of the remote sensors could not be traced to some inaccessible areas. *This is a new advantage* of the applicant's improved method and apparatus, providing the possibility to switch "on/off", to switch "run/stop", to select and change the particle counting and measuring channels, to provide remote sensor diagnostics, to switch the regime (mode) from particle counting and measuring to concentration determination, to select and change the modes for the particle flow velocity, invironmental temperature and/or humidity determination, etc. in the inaccessible areas. Also, the microprocessor or computer (as is) are really well known, but a new use of the microprocessor in the microprocessor *means of the microprocessor system, processing the wireless received particle characteristic data via a conversion means of the microprocessor system in the particle characteristic data processing and control system, is unobvious*. This new combination of such microprocessor system, including a conversion means, using for received data and transmitting control signal conversion to the form acceptable for wireless communication, and remote particle counting and measuring means, and two-way wireless communication *is unobvious* too. The well known processor (as is) is just a component of the *new combined microprocessor system, processing a wireless received data, containing an information about particle size and quantity, and operates in new use (new combination of operation, because of new sequence of operations /algorithm/ for wireless received particle characteristic data processing) and, therefore, such microprocessor system, comprising unobviously operating (considering the processing of wireless received particle characteristic data) microprocessor means, which includes, as a component, the microprocessor (or EPROM), is unobvious*.

The referred device provides a smoke particle detection (registration of existence) only and cannot provide the counting of the particles and especially measuring of the particle size (the referred device cannot operate for the particle counting and measuring) and therefore, cannot provide the wireless transmitting a data, containing a particle quantity and particle size characteristics (the referred device cannot operate for a particle characteristic transmitting), that makes the applicant's improved method and apparatus *an unobvious* and gives (imparts) to the applicant's improved method and apparatus *a new unexpected results* - *a wireless transmitting of the data, containing the particle dimension and quantity information to the remote data processing station.*

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As was mentioned above, the referred device excludes any wireless control of the remote smoke detector (which is titled as transmitter only), considering its application field and functional intention, requiring permanent "stand-by" (switched "on") alarm mode (the referred device is useless for a controllability), that makes the applicant's improved method and apparatus an unobvious and gives (imparts) to the applicant's improved method and device another new unexpected result - *a wireless transmitting of the control signals (for example, mode switching signals) to the remote particle counting and particle measuring means.*

The applicant's improved method and wireless communicating apparatus are commercially successful for the use in the inaccessible (or hard to access) areas, where particle quantity and particle sizes analyzing is needed to be done.

The applicant's improved method and wireless communicating apparatus are succeeded in compliance with the use for the counting and measuring at least as 0,1 m and below 0.1 m particles, considering the eliminating of the electrical cable electromagnetic noise (inherent in all known able to count and measure devices of a prior art), thereby increasing signal to noise ratio, decreasing possible distortion of the processing signals, and thereby the increasing of sensitivity. Also these advantages of the applicant's improved method and apparatus carry a great weight in the crowded art of the particle counting and particle measuring devices.

In contrast, the applicant's improved method and wireless communicating particle counting and measuring apparatus, as apparent from the original Claims 1-14 and substituted new Claims 21-34 and from Figs.3-7, 10, provides wireless controllability of the particle counting and measuring means and provides a wireless transmitting of data (instead of transmitting of the alarm signals only in the referred patent), containing the information about molecular particle characteristics (instead of the registration of the smoke particle existence only).

Also the applicant's improved wireless communicating apparatus for particle counting and measuring omits (withdraws) the analog processing elements, presented in the referred device, without any loss of capability and in contrast, in the improved invention, as apparent from the original Claims 18-20 and substituted new Claims 35-37 and from Figs.8, 9, an improved apparatus provides a timing (digital) signal processing.

Accordingly, original Claims 1-14, 18-20 have been canceled and substituted new Claims 21-37 to recite this distinction. Thus the 35 U.S. C.103(a) rejection of original Claims 1-20, as substituted new Claims 21-37, should be withdrawn.

According to items 4 of the OFFICE ACTION SUMMARY: Applicant has submitted, on 29 January 1998, a lengthy information disclosure statement. However, it appears that no copies of the cited references were provided as required by 37 CFR 1.98(a)(2). Because no copies have been provided, particularly given number of listed documents, the documents listed on the information disclosure statement have not been considered. Copies of any documents that applicant particularly desires to be considered need to be submitted.

Applicant apologize for missing copies of each of reference, cited in application, in order to consider the references. All copies are attached to the present amendment on the separate papers.

In view of the foregoing amendments, substitutions and accompanying remarks, rejections of original Claims 1-20 as substituted new Claims 21-37, should be withdrawn.

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Applicant thanks Examiner for very useful advice regarding Patent Attorney and this amendment has been prepared with Patent Attorney assistance, however, the applicant, as pro-se applicant, respectfully request under M.P.E.P. 707.07(j), that if the Examiner feels that Applicant's present Claims are not entirely suitable, the Examiner drafts one or more allowable Claims for Applicant.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant, at the telephone number indicated below, to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees, which may be due with respect to this paper, will be paid by Applicant.

For all the reasons given above, applicant respectfully submits that the errors in the specification are corrected and the claims comply with Sections 103(a). Accordingly, applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits.

Very respectfully,



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November 08, 1998

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I certify that this correspondence will be deposited with the United States Postal Service as Certified First Class Mail proper postage affixed in an envelope addressed to: "Assistant Commissioner for Patents, Washington, DC. 20231" on the date below.

Date: November 10, 1998 Applicant: ALEKSANDR L. YUFA



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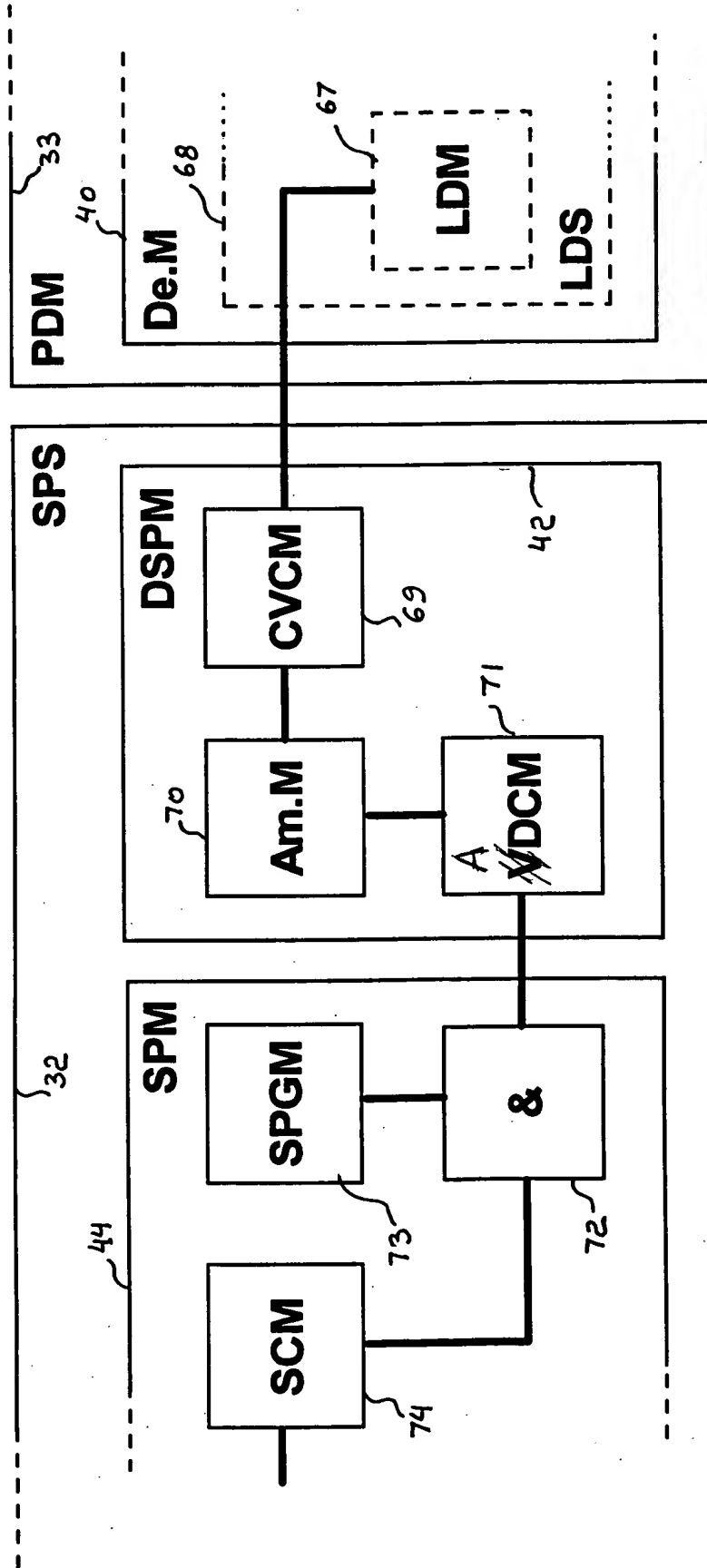


Fig.8

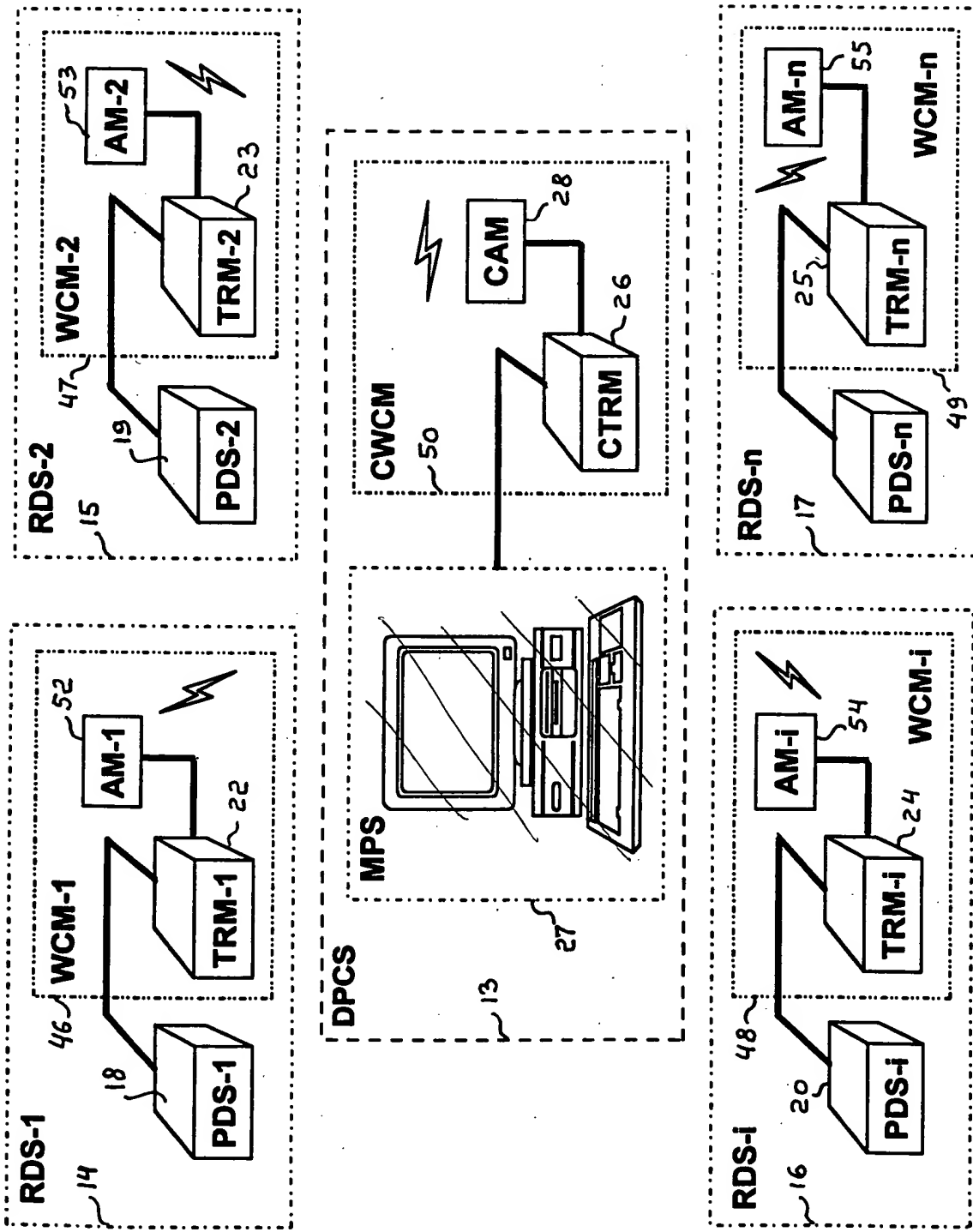


Fig. 10